Additionally, the Office Action indicated that a new title is required that is clearly indicative of the invention to which the claims are directed. Applicant submits that the title is descriptive of the invention and that the title could not be more descriptive without making it longer. The invention is a system for parallel processing of queries and updates. "Parallel processing" are the last two words in the title. As explained in the summary, the system is capable of accomplishing "discrete" parallel processing, meaning that each server can process queries and updates without making reference to data on any other server. The system is "data driven" in that the data content of each query determines the server to which the query is directed and the data content of each update directs the server to which the update is directed.

Perhaps the Examiner means that the title should include a noun which specifies a class of invention to which the claims are directed such as: device, apparatus, system, method, or process. If this is the case, applicant suggests the appropriate word to add is "system", added at the end of the title. Applicant submits however that the addition of this word is not necessary because the use of the gerund form of a verb "processing", implies a method which is also a subject of the claims.

The Office Action also pointed out that the application names joint inventors. In considering patentability of the claims, applicant is obligated under 37 CFR § 1.56 to point out the inventor and the invention dates of each claim that was not commonly owned at the time a later invention was made so that the Examiner may consider the applicability of 35 U.S.C. §103(c) and potential 35 U.S.C. §103(e), (f) and (g) prior art under 35 U.S.C. §103(a). Applicants are aware of this obligation, however, the Examiner's presumption of common ownership at the time the invention was made was correct.

Claim Rejections Under 35 U.S.C. §103(a)

The Office Action rejected Claims 1-45 under 35 U.S.C. §103(a) as being unpatentable over Platt. The applicant disagrees and suggests that in fact Platt teaches away from the claimed inventions. Applicant submits that Platt is an

example of the prior art method of distributing a data base across multiple servers described in lines 12-22 on page 1 and as shown in Figure 1 of the application. All of the teaching in Platt is about distribution of tables of a relational database across multiple servers. As shown in table 1 on page 13 of Platt, Platt illustrates a relational database where the information can be accessed by person's name, by age, or by height. As taught by Platt, when this table is divided in two, as shown on page 14, a synonym for each sub-table must be placed in an index which is consulted to determine the table in which the data sought can be found.

As stated in the application on line 17, the invented system and method will not work for relational databases because the data must be represented as a single, key-ordered list of objects rather than by tables with relations between items in tables. The invented system will not work where data is stored in multiple tables or where there are multiple indexes for accessing the data. Platt does not suggest that data to be stored might be represented as a key-ordered list rather than as tables with indexes. For example, on page 6 lines 15 – 16, Platt suggests that two or more tables may be "partitioned" across multiple servers. Likewise, on page 9 lines 8 – 10, Platt refers to a plurality of tables and to the use of table names. A system that works with a single key-ordered list does not have any use for table names because, in effect, there is only one huge "table" which has no index because it is merely an index. Further examples are on page 11 lines 2 – 6 and lines 26 – 32 of Platt.

Similarly, on page 15, Platt shows a query where data represented by an asterisk is to be selected from a table called "people". Because the "people" table is distributed across two servers, this query is restated as two separate queries, one directed to each portion of the people table. Thus, it is the name of the table that is used to direct each query. By contrast, the invented system uses the data itself rather than the name of a table to direct each query to a server. In the Platt example, the data is represented by the asterisk.

The above discussion may be applied to claim 1 as follows. Element b specifies a query processor which "based on data content of the query" directs

queries to one of a plurality of servers "by comparing the data content of the query to the specified range of keys for each segment". By contrast, Platt operates by comparing a table name to a list of synonyms for that table name and turning a single query into multiple queries, one for each server, if the specified table has been distributed across two servers. Turning each query into multiple queries and sending one to each server is the opposite of the claimed invention. The purpose of the invention is to minimize the number of queries that are sent to each server (at the expense of data storage requirements). Element b of claim 1 specifies that each query is directed to only one server, and the direction is determined based on data content and not a table name.

Claim 16 is analogous to claim 1 and all the other claims depend from claim 1 or claim 16.

CONCLUSION

In view of the foregoing remarks, applicants submit that all of the claims of the present application are patentably distinguished over the teachings of the cited and applied reference. Thus applicants submit that this application is in condition for allowance. Reconsideration and re-examination of the application and allowance of the claims and passing of the application to issue at an early date are solicited. If the Examiner has any remaining questions concerning this application, the Examiner is invited to contact the applicants' undersigned at the number below.

Respectfully submitted,

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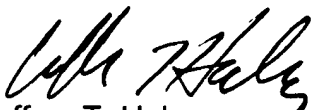

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